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GAME
Care
and
Preparation
in the
Field
and
Home

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GAME Care & Preparation

CONTENTS

Nutritive Value	3
Care in the Field	3
Small Mammals	3
Birds	3
Deer	4
Final Dressing for Cooking or Freezing	6
Small Mammals	6
Birds	7
Deer	9
Short-Term Storage in the Home	9
Cooking Small Animals—Muskrat, Rabbit, Squirrel	9
Cooking Birds—Duck, Grouse, Pheasant	10
Venison	10
Know the Cuts	11
Cooking Venison	11
Basic Methods of Cooking	12
How To Vary the Flavor of Game	13
Long-Term Storage of Game	14
Freezing	14
Canning	15
Other Methods	15
Game Preparation Chart	16

This bulletin includes information on the care and preparation of the following species of game animals and birds:

Small game animals—*Muskrat, Rabbit, Squirrel*

Game birds—*Duck, Grouse, Pheasant*

Large game animals—*Deer*

The list does not include all the game taken in New York State, but these species have been selected as representative examples. The principles of care and preparation described in this bulletin may be applied to other animals and birds not mentioned.



in the Field & Home

NUTRITIVE VALUE

Game rates high as a source of protein. In this way it is similar to other meat and poultry. Game is usually lean meat.

Game can be served in a number of delicious ways, but it must first be properly handled in the field, dressed correctly, and cooked by approved methods.

CARE IN THE FIELD

Field dress all game as soon as it is shot, for bacterial action can begin immediately. The more badly damaged the animal, the more likely bacteria are to attack the flesh, causing it to become strong flavored or spoiled. Field dressing usually means removing the viscera, where most of the spoilage bacteria are found. In large animals such as deer and bear, it must also include bleeding.

Eviscerating an animal has a secondary but important benefit in that it opens the body cavity to the air and thus allows more rapid cooling of the carcass.

Small Mammals

To eviscerate a small mammal, insert the knife blade, sharp edge up, at the tip of the breastbone. Cut along the belly towards the vent until the entire body cavity is laid open. The viscera can then be easily removed by grasping them above the stomach and pulling down and out from the body cavity.

Birds

To eviscerate a bird, insert the knife, sharp edge up, midway between the tip of the breastbone and the vent. Make a cut at right angles to the long axis of the body, taking care not to cut into the viscera but only through the skin and the thin muscular covering of the body cavity (figure 1). Grasp the bird by the breast with one hand; with the other, pull downwards on the tail section, thus opening the body cavity so that the viscera are exposed and can be pulled out of the bird (figures 2 and 3).



If the bird or small animal has been gut shot and any contents of the stomach or intestines are found on the flesh of the body cavity, it is very important to wipe this material away. This can be done with a wad of clean grass, a dry cloth or newspaper, or some other suitable agent.

Deer

Field dressing a large animal, such as the white-tailed deer, is not as simple as field dressing small game. The amount of material which has to be removed from the body cavity is considerably greater, not only because the animal is so much larger but because it is usually shot with a large bore rifle or a rifled slug from a shotgun. This often does more damage to both the flesh and the viscera than is done on a relative scale by shotgun pellets to small game. It is also frequently necessary to bleed deer, whereas this is usually of minor importance with small game.

First, place the deer so that its shoulders are lower than the hind quarters. Then bleed it by inserting a knife as far as possible into the neck at the point where it meets the breast. Tilt the knife towards the backbone and withdraw it with a slight slice. Gravity should take care of the rest.

After the deer is bled, reverse the position of its body so that the hind quarters are somewhat lower than the shoulders and proceed as follows to remove the viscera. Insert a knife 8 to 10 inches behind the point of the breastbone and cut along the center line of the belly to within 6 inches of the tail (figure 4). In this cutting process, it is important to keep the tip of the knife from cutting into the paunch or intestines. Make a circular cut from the outside completely around the vent to free it and the large intestine from the body (figure 5). Again, be careful not to cut into the intestine.

Next, cut through the diaphragm, the thin muscles separating the chest from the stomach cavity (figure 6), and cut the windpipe (figure 7). By pulling backward and outward, it is possible to remove the heart, lungs, liver, and entire digestive tract in one operation (figure 8). Carefully cut free the heart and the liver from the rest of the viscera and save them — these organs make excellent eating. Experienced hunters carry a small cloth bag or a supply of cheesecloth in which to wrap the heart and liver. Wipe the body cavity clean with a dry cloth (figure 9). It is best not to use any water in wiping out the body cavity unless there is considerable evidence of intestinal contents within, for moisture aids the decay bacteria in their action.



After eviscerating the animal, examine the wound area. Free the hide from the shot-damaged areas of the wound and cut away all bloodied flesh. If this flesh is not too badly damaged, it may be saved and soaked in salt water overnight to draw out the blood; the meat may then be used for deerburgers.

To promote rapid cooling of the carcass, prop open the body cavity with a stick as soon as possible. Remember, if the deer is to be transported by automobile for some distance before it can be hung to cool, make a special effort not to allow the carcass to become warm or come into contact with the warm portion of the automobile. Perhaps the worst thing that can be done is to drape the deer over the front fender of a car with its body constantly exposed to the heat of the engine. Instead, carry it on the trunk or the roof of a car where there is no extraordinary amount of heat.

As soon as the deer has been brought to the camp or home, hang it by its antlers, front feet, or hind feet to complete the cooling process. Prop open the body cavity with a stick to permit free air circulation and cooling both inside and out.

FINAL DRESSING FOR COOKING OR FREEZING

The final steps in dressing game, after returning home, include removal of the skin of mammals and removal of the feathers of birds, as well as removal of the unwanted parts of the body such as the feet, head, tail, and non-fleshy parts of the legs. Also at this time, the animal should be examined thoroughly for shot-damaged flesh.

Small Mammals

Skin a small mammal, such as a rabbit or a squirrel, by holding or suspending it by the hind feet and working the skin downwards towards the head. In the case of a rabbit this may be done simply by tearing large pieces of the skin away with the fingers, without the aid of a knife. The skin of rabbits is very weak and thin and separates from the flesh quite easily.

Squirrels have a comparatively tough hide which does not separate from the body easily. Consequently, it is necessary to make several cuts with a sharp knife before the skinning process can be completed.

Make the first cut at the base of the hind leg just above the foot. This should be a circular cut to free the skin from the foot. Make a similar cut on the other hind foot. Then make a cut beginning along the leg on the inside of the thigh

to the vent. Make a similar cut on the opposite leg. Free the skin from the two hind legs and work it free as far down the back as possible and around the tail bone. Cut free the tail which should remain attached to the skin. Now step firmly on the tail and pull upwards on the body of the animal with steady pressure. This should part the skin from the body as far down as the head and forelimbs.

Skin the forelimbs and chest regions by working the skin free with the fingers. With older squirrels, it is not uncommon for the connective tissue which holds the skin to the flesh around the shoulders to be very strong. In this case it may be necessary to make some small cuts at the point where the skin is fastened to the flesh in order to free the skin. After skinning the animal as far as the head and freeing the forelegs, cut off the head and the feet.

Examine the body of the animal carefully and cut away all evidence of shot-damaged flesh. Wash the carcass to remove all evidence of blood and hair. If there are many partially bloodied areas remaining, it may be wise to soak the animal for 2 to 6 hours in cold salt water (1 tablespoon of salt per 1 quart of water).

Birds

Upland birds such as grouse and pheasant may be plucked or skinned. But it is preferable to pluck them whenever possible as the skin helps to keep the surface from drying out. Therefore, care should be taken not to tear the skin of the birds during plucking.

Generally, the longer the period of time between shooting the bird and plucking it, the tighter the feathers seem to be in the skin. If it has been some time since the bird was taken, it may be necessary to scald it in order to pluck the feathers easily without tearing the skin. To do this, dip the bird in scalding water repeatedly until the feathers are wet to the base. Then remove the feathers with very gentle tugs.

If the bird is to be plucked dry, use the following technique: Take a small amount of feathers between the thumb and forefinger and pull with a downward motion in the direction of the feathers. Do not grasp more than a few feathers at one time or the skin may tear.

After plucking, pass the bird quickly over a flame to remove any remaining pin feathers by singeing. Remove the head and feet and examine the body for any shot damage. Shot-damaged areas on birds may be treated similarly to those in small mammals (see above).



10



11

The oil sac on the upper part of the tail of pheasants should be removed (figures 10 and 11); the oil often imparts a disagreeable flavor to the cooked meat.

Ducks. Ducks are more difficult to pluck than grouse or pheasant as ducks have a dense downy underplumage which is not removed by the usual methods. The outer plumage is easily plucked dry. In fact, it is difficult to scald ducks for their plumage is so well oiled that even hot water does not easily penetrate it. Follow the same procedure for dry plucking ducks as for other game birds.

After removing the outer plumage, remove the underplumage by coating the bird in a couple of layers of paraffin. Melt three or four bars of paraffin on the top of boiling water in a fairly deep kettle. After the paraffin has melted, dip the birds through the paraffin into the water. Each time a dip is made, allow the bird to cool before dipping again. After applying three or four coats in this manner, allow the paraffin on the duck to cool and become hard. Then it may be scraped off with a dull knife, such as a table knife; all of the down and pin feathers will be removed and the skin cleaned. The head of the duck may be removed prior to the dipping process, but it is convenient to retain the feet until after dipping as these provide something to hold on to.

To remove the oil sac, see figures 10 and 11.

Deer

The procedure for skinning a deer is basically the same as removing the skin from a small mammal. The deer's skin is tough, however, and in many places is held firmly against the hide by connective tissue. Proceed in the same manner as skinning a squirrel, making the same basic cuts around the legs and the feet and cuts along the inner parts of the thighs to the vent region. In freeing the skin from the legs, back, and chest, it may be necessary to make frequent cuts with a knife on the connective tissue. After the animal is skinned, check it very carefully for any remaining shot-damaged areas. These should be completely cut away. Then remove and discard all unwanted parts of the carcass.

Unless you have the necessary equipment and skill, it is advisable to take the animal to a butcher or a meat processing plant for cutting.

SHORT-TERM STORAGE IN THE HOME*

Raw meat. Like other meats, game is perishable. For a short period of time, game may be stored in the refrigerator. Cover or wrap loosely unless the refrigerator has a space specifically designed for unwrapped meat. Use within 3 or 4 days. Organ meats and ground game should be used within 1 to 2 days.

Cooked game. Leftover cooked game may be stored in a covered container in the refrigerator. Use within 3 to 4 days for best flavor.

COOKING SMALL ANIMALS — MUSKRAT, RABBIT, SQUIRREL

Small game animals are characterized by a fine, delicate flavor. Almost any method of cooking can be used. They may be cooked whole or cut-up. To cut up the meat, use poultry or kitchen shears. For number of servings per animal, see chart on page 16.

Cook game by age. It is very difficult to determine accurately the age of game taken. But 80 per cent of the small game taken in season is less than 1 year old. This game is tender and may be cooked by oven-roasting, broiling, or pan-broiling methods. The oven-roasting method is preferred because of the tender, moist product which results (see page 13). Older, less tender game is best cooked by the braising or pot-roasting method (see page 12). Spices or a sauce may be added.

* Information about long-term storage of game may be found on pages 14-15.

How to keep the outside tender. Small animals are always skinned. During oven-roasting, the outside of the meat will become dry and tough. To avoid this, use an oil or fat-soaked cheesecloth cover during roasting. As the cheesecloth dries, baste with more oil or fat. Use bacon fat, butter, or other fat. Bacon fat masks the delicate game flavor.

COOKING BIRDS — DUCK, GROUSE, PHEASANT

Game birds include upland birds such as grouse and pheasant, and waterfowl such as dabbling and diving ducks. Upland birds are mild in flavor and tender. While both dabbling and diving waterfowl are tender, they differ in flavor because of their feeding habits.

Cook game birds by age. As with small game animals, it is very difficult to determine accurately the age of game birds. But 80 per cent of the game birds taken in season are under 1 year in age. These are considered young and are best cooked by the oven-roasting or broiling method (see pages 12 and 13) to preserve their delicate flavor and texture; game birds are usually preferred when oven-roasted. Old birds may be braised or pot-roasted (see page 12) to tenderize the tough connective tissue.

How to keep the outside tender. Birds may come to the kitchen plucked or skinned. The skin keeps the surface of the meat from drying out. When oven-roasting plucked birds, cover with a piece of oil or fat-soaked cheesecloth for the first half of the roasting period. Cover skinned birds with oil or fat-soaked cheesecloth for the whole roasting period to prevent excessive drying of the surface of the meat.

Birds in this group are usually roasted whole but may be cut into halves. For number of servings per bird, see chart on page 16.

VENISON

Meat from deer has a distinct flavor not comparable with any other meat. Venison is usually lean. Much of the flavor is concentrated in the fat. The fat seems to turn rancid more quickly than that from domestic meat animals. The fat hardens easily and has a tendency to cling to the roof of the mouth. Like lamb, venison is best when served piping hot.

Many families prefer to grind all or most of the deer meat, especially if the animal is old or has a small proportion of meat to bone. Use ground venison in combination with ground beef, lamb, or pork as you would any other ground meat.

Know the Cuts

Hind and foresbank. Use for soup, stew, in ground meat, sausage, or deerburgers.

Round. Venison round steaks must be braised unless they are from a young animal, in which case they may be broiled. The lower part of the round is suitable for a pot roast. When the leg is small, it may be oven-roasted all in one piece like a leg of lamb.

Loin or "saddle." This is the choicest part of the animal. The meat is tender and may be broiled or oven-roasted. In young animals, this cut yields a small number of servings.

Shoulder or chuck. The top of the shoulder makes a good pot roast. The arm makes a good cut for mincemeat or ground meat. This cut would be suitable for canning.

Rump. This is used for pot roast. If from a tender young animal, it makes a very good oven roast. It may also be canned.

Neck, flank, and breast. The flank and breast contain an appreciable amount of meat. They are most palatable when ground and used for sausage, meat loaf, and deerburgers, or cubed and used for soup or stew. The neck is tender after the tendons have been removed. It may be made into pot roast, stew, mincemeat, or ground meat.

Cooking Venison

Cook venison by age. The basic methods of cooking may be used to cook venison (see pages 12 and 13). The braising or pot-roasting method is recommended for cooking venison from older animals and the less tender cuts from young ones. Use the oven-roasting or broiling method for cooking tender cuts.

How to tell the age of venison. The age of deer taken in New York State may vary from 5 months to 8 or more years. The weight or the antlers are not reliable guides to age. The only reliable way to tell age is by examining the teeth in the lower jaw. This requires experience and skill. The State Conservation Department check stations will provide experienced assistance in determining the age of deer taken. For cooking purposes, animals under 2 years are considered young and are likely to be tender.

Do not overcook venison. When using the oven-roasting method allow 20 to 30 minutes per pound in a slow oven, 300°F. Approximate cooking times for other methods are found on page 16.

Cover venison with an oil or fat-soaked cheesecloth during roasting to prevent drying of the outside. As the cheesecloth dries, brush with additional oil or fat.

BASIC METHODS OF COOKING

Directions for braising or pot-roasting:

1. Use a Dutch oven or frying pan with a tight-fitting cover.
2. Cut the game into serving-size pieces if desired.
3. Coat the pieces of game in flour seasoned with salt and pepper.
4. Place in the pan enough fat to cover the surface about $\frac{1}{4}$ -inch deep. Have the fat hot, but not smoking.
5. Brown the pieces of meat slowly in the fat, turning them to brown evenly.
6. Place the meat on a rack. Add a small amount of liquid.
7. Cover tightly, cook over very low heat or bake in a slow oven, 300°F., until tender. Approximate times are given on page 16. More liquid may be added if necessary.
8. Remove the cover during the last 15 minutes, to produce a crisp outside crust.

Directions for broiling:

1. Grease the broiler rack and adjust it so the game will be 4 to 6 inches from the source of heat.
2. Preheat the broiler.
3. Brush both sides of game with melted fat and season with salt and pepper. Place on the rack.
4. Broil, brushing with melted fat frequently. Turn the pieces as they brown.
5. Broil until just done. The broiling time will depend upon the thickness of the meat and degree of doneness desired. Approximate times are given on page 16. Do not overcook. To test for doneness, cut into meat with a sharp knife and observe the interior color. Your experience with other red meats will be a guide to cooking.

Directions for pan-frying:

1. Select a heavy frying pan large enough to hold pieces without crowding.
2. Melt enough fat to cover the pan with a thin layer of fat. Do not allow the fat to become so hot that it smokes.
3. Place the game in the pan. Turn the pieces as they brown. Add more fat if needed. The size of the pieces will determine the cooking time. Your experience with poultry and other meat will be a guide.

Directions for oven-roasting:

1. Place game on a rack in a shallow pan. Do not cover the pan.
2. Cover the meat with a piece of cheesecloth dipped in oil or fat. If the cloth dries out during cooking, use a brush to add more. In the case of plucked game birds, remove the cheesecloth for the last half of roasting to produce a crisp skin.
3. Roast the game in a slow oven, 300°F. The table on page 16 gives approximate roasting times. The game is done when it feels tender and soft. Game birds and small game animals do not have enough meat on their bones to use a thermometer. But when a thermometer can be used, cook to an internal temperature of 185°F. Cook game until done. Do not overcook as this results in dry, tough meat.

Stuffing for game birds:

Stuffing of game birds is optional. The stuffing does not change the flavor of game greatly.

Use your favorite poultry stuffing recipe for game.

The roasting time is longer when game is stuffed. You may prefer to bake the stuffing in a separate greased baking pan to save time.

To tell when stuffed game is done, use a meat thermometer inserted in the center of the stuffing. The thermometer should read 165°F. when done. If the bird is covered with an oil or fat-soaked cheesecloth during roasting, the additional time required to roast because of the stuffing will not overcook the meat. For approximate times, see page 16.

Stuffing is perishable and may be responsible for food poisoning. Prepare the stuffing and stuff the bird just before placing it in the oven.

HOW TO VARY THE FLAVOR OF GAME

1. *Soaking.* The distinct game flavor will be milder after soaking in a salt or vinegar solution. Before cooking, allow the game to soak overnight in the refrigerator in either of the following solutions:

- a) Salt — 1 tablespoon added to 1 quart cold water
- b) Vinegar — 1 cup added to 1 quart cold water

Use enough solution to cover the game completely. Discard the water after soaking.

Barbecue sauces or marinades may be used for soaking game. The length of soaking time may be as long as overnight or as short as one hour. Use the sauce or marinade to baste the game during cooking.

2. *Substitute game for meat in other recipes.* Because the principles of meat cookery apply to game cookery, game may be successfully substituted for beef, veal, or pork in such recipes as:

Goulash	Swiss steak	Chop suey
Chili	Stew	Stroganoff
Sauerbraten	Meat loaf	Fricassee

3. *Flavor additions are possible with sauces.* To many people, the following additions go with game:

Sour cream	Cream	Sweet relish
Tomato	Worcestershire	Molasses
Lemon	Horseradish	Brown sugar
Catsup	Cheese	Maple sirup
Chili	Onion	Maple sugar
Creole	Fruit	Tabasco

4. *Stuff game birds with apples.* Apples cut into chunks may be used as a stuffing. The apples will absorb some of the game flavor during roasting. Usually the apples are discarded after the roasting is completed.
5. *Spices and herbs.* Flavor additions through spices and herbs, used with discretion, add zest to game dishes. Any spice or herb used to cook other meats may be used in game cookery. Some suggestions are:

Basil	Thyme
Oregano	Bay leaf
Marjoram	Savory
Sage	Rosemary

LONG-TERM STORAGE OF GAME

Freezing

Game may be frozen successfully. For game animals, follow directions for freezing meat; for game birds, use directions for freezing poultry.

The maximum storage time for game is less than that for other meats. For best eating, use game within 4 months. In New York State, "the carcasses and flesh of upland game birds, and of small game other than beaver, fish, and otter, and of deer and bear, may be possessed and transported without permit during their respective open seasons and until August 1 immediately following."*

For successful freezing of game:

- Freeze only high quality game. Freezing does not improve the meat.
- Moisture-vapor-resistant packaging materials and proper packaging are essential to maintain quality of the frozen product.

* From section 235 of New York State Fish and Game Law, page 130.

- Label all packaged game with the name of the product, the date frozen, number of servings or weight, and any other pertinent information.
- Freezer temperature should return to 0°F. or lower within 24 hours after the food has been put in to freeze, otherwise the freezer is overloaded.
- The storage temperature should be steady at 0°F. or lower to maintain the original quality of the food.

Tips on packaging game:

- Force as much air as possible out of each package while wrapping. Air trapped in packages will cause drying, change of color, and loss of flavor.
- Remove as many bones as possible since they take up valuable freezer space.
- Before packaging, pad the sharp points of bones with several folds of polyethylene or other freezer wrapping material to prevent punctures.
- Place two layers of freezer wrapping materials between slices of meat. This will facilitate thawing and separation of the pieces.
- Small packages will freeze and thaw faster than large ones.
- Package ground game, unsalted, in bulk or made into patties in amounts suitable for the family's use. Salt hastens the development of rancidity of the fat in frozen game.

How to thaw and cook frozen game:

- Thaw game before cooking. Leave the game in its original wrapping to prevent excess moisture loss by evaporation. Like other meats, the refrigerator is the best place for thawing.
- Approximate times for thawing frozen game in the refrigerator are:
 - 1-inch steaks — 12 hours
 - Small roasts — 3 to 4 hours per pound
 - Large roasts — 4 to 6 hours per pound
- Cook frozen and thawed game as you would fresh game.

Canning

Any game may be successfully canned at home. Especially suited for canning are less tender game animals that require the braising method of cooking.

The pressure cooker method of canning is the only safe method recommended.

Follow directions for canning meat when you are canning game. Use either the raw pack or hot pack method.

Other Methods

Game may be preserved by curing and smoking or by making into sausage. In many areas, small meat dealers will be able to do this job for you.

GAME PREPARATION CHART

Species	Ready-to-cook weight	Number of servings	Cooking methods recommended	Approximate cooking time*
Small game animals:				
Muskrat	$\frac{3}{4}$ to 1 pound	1 to 2	Oven-roasting Broiling or pot-roasting	$\frac{3}{4}$ to 1 hour at 300°F. $\frac{3}{4}$ to 1 hour
Squirrel	$\frac{1}{2}$ to $\frac{3}{4}$ pound	1 to 2	Oven-roasting Broiling or pot-roasting	$\frac{3}{4}$ to 1 hour at 300°F. $\frac{3}{4}$ to 1 hour
Rabbit	$\frac{3}{4}$ to 2 pounds	2 to 4	Oven-roasting Broiling Broiling or pot-roasting	1 hour at 300°F. 30 to 40 minutes 1 hour
Game birds:				
Duck	1 $\frac{1}{4}$ pounds	2 to 3	Oven-roasting Broiling or pot-roasting	$\frac{3}{4}$ hour at 300°F. without dressing 1 $\frac{1}{4}$ to 1 $\frac{1}{2}$ hours at 300°F. with dressing 1 hour
Grouse	1 pound	2	Oven-roasting	1 hour at 300°F. without dressing 1 $\frac{1}{2}$ to 2 hours at 300°F. with dressing
Pheasant	2 pounds	2 to 4	Oven-roasting	1 hour at 300°F. without dressing 1 $\frac{1}{2}$ to 2 hours at 300°F. with dressing
Venison:				
Round Loin	2 to 2 $\frac{1}{2}$ pounds 2 pounds	** **	Broiling or pot-roasting Broiling Oven-roasting	1 $\frac{1}{2}$ to 2 hours 30 to 40 minutes 20 to 30 minutes per pound at 300°F.
Shoulder Rump	2 $\frac{1}{2}$ to 3 pounds 1 $\frac{1}{2}$ to 2 pounds	** **	Broiling or pot-roasting Broiling or pot-roasting	1 $\frac{1}{2}$ to 2 hours 1 $\frac{1}{2}$ to 2 hours

* Game is usually preferred when cooked to the well-done stage.

** Venison is similar to beef and other meats with respect to number of servings per pound: Cuts with a medium amount of bone yield 2 to 3 servings per pound; cuts with a large amount of bone yield 1 to 2 servings per pound.



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